



# Japan-ASEAN Science, Technology and Innovation Platform (JASTIP)

## WP3: Bioresources and Biodiversity

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**2017 GBIF Asia Regional Meeting**  
13-14 June, 2017, Hanoi, Viet Nam  
**HOA BINH HOTEL**

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# Japan Science and Technology Agency

**SCICORP**: Strategic International Collaborative Research Program

**CHIRP**: Collaboration Hubs for International Research Program

Started from 2015

5-year project



Yasuyuki Kono  
Kyoto University

Akira Takagi  
Kyoto University



21 Steering committee

From Kyoto University,  
The University of Tokyo,  
Osaka University, Hokkaido University,  
AIST, NSTDA, KMUTT, LIPI, AUN



# Three Missions of JASTIP

1. Implementation of advanced international **joint research**
2. Promotion of **societal implementation** of research achievements
3. Fostering **human resources**



## Joint Laboratories

New Laboratories will join soon

Kyoto Univ.:  
RISH, GSA



Japan

NSTDA



LIPI: RC-Biology,  
RC-Biomaterials  
Cent. for Innovation



Kasetsart Univ.



Chulalongkorn  
Univ.



New Laboratories will join soon

ASEAN

## Bioresources and Biodiversity Studies

- Autoclave Class N Sterilization
- Bio Safety Cabinet Class II Type A2
- Multi-Stack Reciprocating Shaker
- Incubator digital
- Refrigerated centrifuge 5424
- 4 x 8-tube PCR strip rotor, include Lids
- Rotary evaporator IKA RV10 Digital V



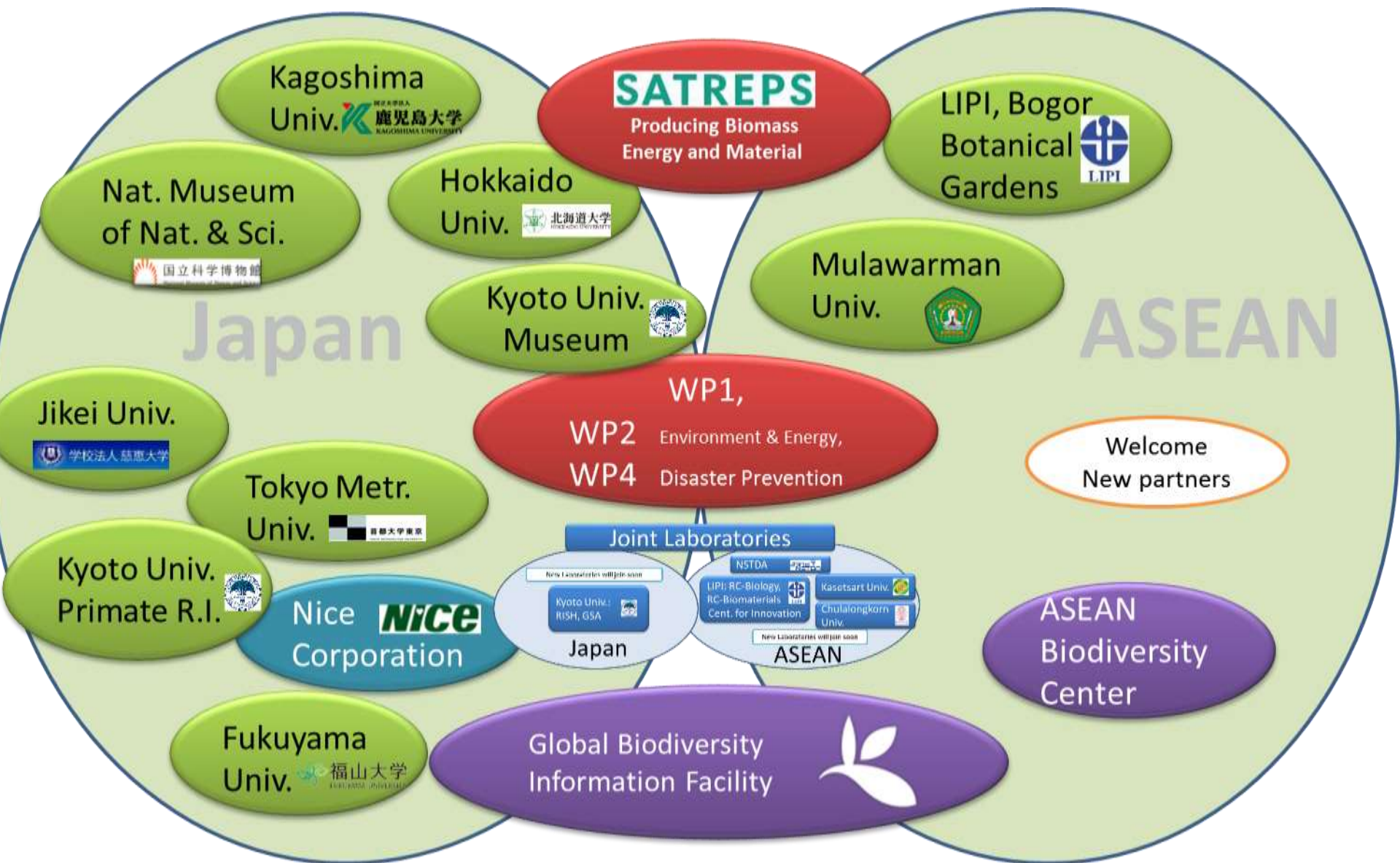
## RC Biomaterials



## RC Biology



# Platform Connecting Japan and ASEAN

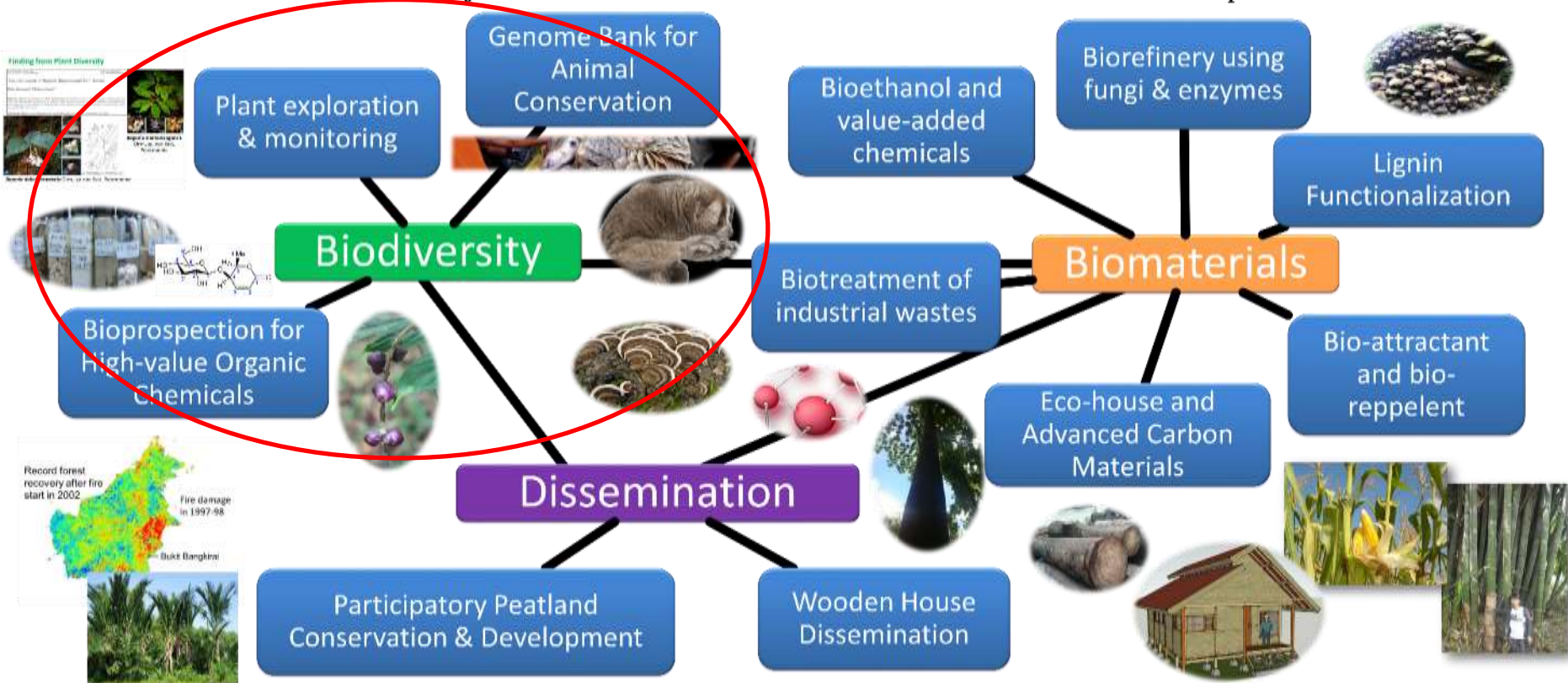


## WP3 Research Activities

We have three research clusters.

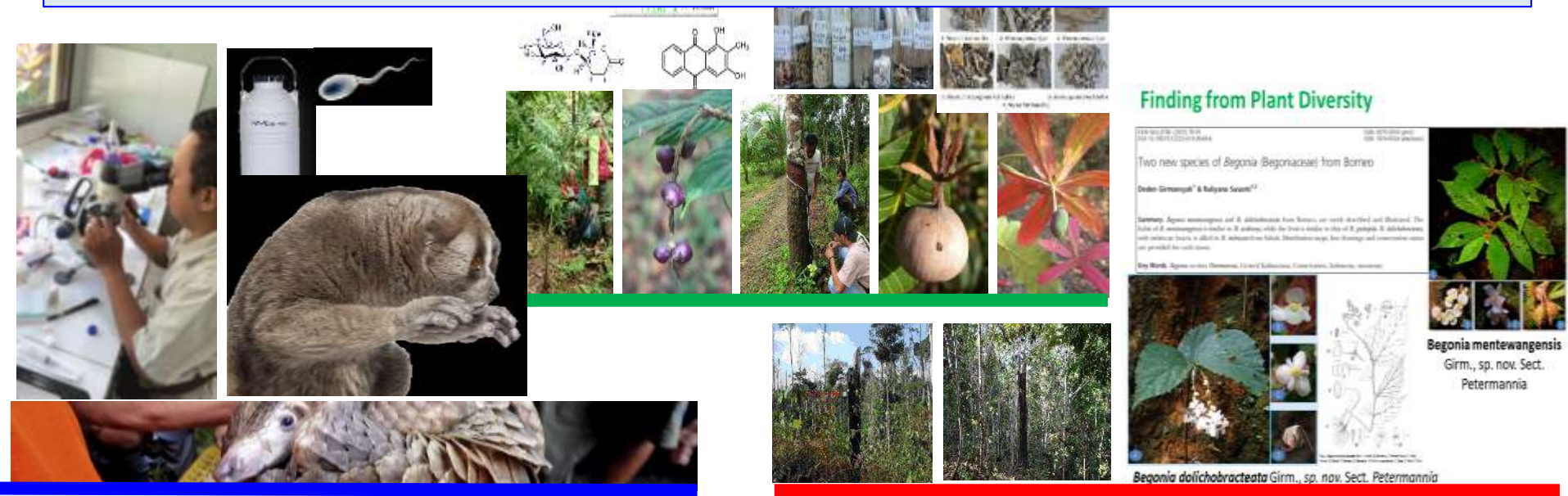
- **Biodiversity cluster** focuses on the biodiversity exploration/prospection, monitoring, and conservation.
- **Biomaterials cluster** focuses on the development of innovative utilization of biomaterials and biodiversity.
- **Dissemination cluster** focuses on the utilization and diffusion of innovative technology to the society.

These three clusters are flexibly collaborate each other and also collaborate with WP3 platform institutions.



# Biodiversity Study in JASTIP WP3

- Biological resource research based on ownership of the bio-diversity
  - Strengthening of the biological diversity information database and depository
- Genome Resource Bank Centre as the Backbone of Future Indonesian Wildlife
  - Plant diversity of Kalimantan: Profiling and Mapping of habitat loss
  - Bioprospecting of plant resources in South East Asia to produce highly value-added products



### Finding from Plant Diversity

Two new species of *Begonia* (Begoniaceae) from Borneo

Dr. G. S. S. & R. S. S.

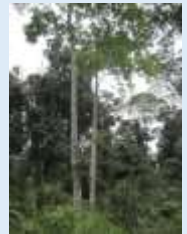
*Begonia mentewangensis* Girm., sp. nov. Sect. *Petermannia*

*Begonia dolichobracteata* Girm., sp. nov. Sect. *Petermannia*

# Bioresource Utilization Study in JASTIP WP3

## R&D into tropical plant breeding, conversion, conservation and utilization

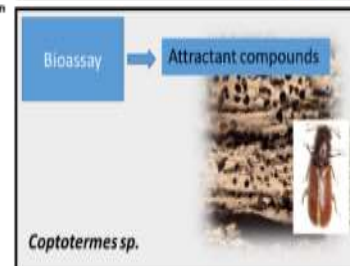
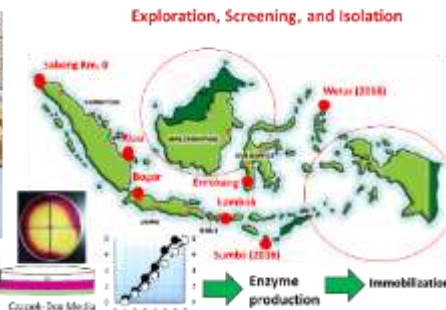
- Conversion of tropical biomass into functional materials, adhesives, chemicals and fuels
- Screening of useful plant species for material production
- Control of invasive wood-attacking insects
- Bioremediation using tropical microbes and enzymes
- Eco-house and wood architecture with high safety
- Plant breeding and revegetation of deteriorated land



Platinum Teak



Candlenut shell (*Aleurites moluccana*) #Kemiri



Design the bait system:

- Bait toxicant: combination of slow-acting toxicant and attractant compound
- Bait trap: attractant compound
- Through bioassay in laboratory and semi-field test, a proper design of bait system could be developed



labon (*Anthocephalus cadamba* Miq.)





# Dissemination of Innovation in JASTIP WP3

- Development and Diffusion of Innovation for Conservation and Sustainable Utilization of Peat Lands in Indonesia: An Ecosystem-Based Approach



# Symposia and Workshops

WORKSHOP

**1st JASTIP Bioresources and Biodiversity Lab WS**  
Kyoto, February 17, 2016



**2nd JASTIP Bioresources and Biodiversity Lab WS**  
Kyoto, January 23, 2017

SYMPOSIUM



**JASTIP WP3 Kick-off Symposium**  
Jakarta, June 10, 2016  
**2nd JASTIP Symposium**  
Jakarta, June 11, 2016



JOINT SEMINAR



**Joint Seminar**  
**“Utilization of Sago Ecosystem for Peatland Restoration”**  
Jakarta, 2016 August 11<sup>th</sup> – 12<sup>th</sup>



**Joint School & Symposium**  
**“ *Humanosphere Science School 2016* “**  
**“ *The 6th International Symposium for Sustainable Humanosphere* “**  
Jakarta, 2016 August 11<sup>th</sup> – 12<sup>th</sup>

# Coming Symposium

Will followed by a symposium on  
“ASEAN-Japan Collaboration for  
Biodiversity Exploration and  
Utilization”

## 4<sup>th</sup> JASTIP Symposium “Biomass to Energy, Chemicals and Functional Materials”

Date: 3<sup>rd</sup> and 4<sup>th</sup> July 2017  
Venue: NSTDA, Rangsit, Thailand



This symposium is focus on biorefinery research, which is an interdisciplinary research field beyond energy & environmental research, and bioresources & biodiversity research. Biorefinery is a biomass conversion processes to produce value-added chemicals including biofuels and bioplastic.

Organized by



JASTIP

Co-organized by



LIPI



Registration

<http://jastip.org/en/eventinfo/4symposium/>

JASTIP Secretariat:

Thailand, Tel: +66-64-153-7969, Fax: +66-2-664-0960, e-mail: [Jastip-contact@kura.kyoto-u.ac.jp](mailto:Jastip-contact@kura.kyoto-u.ac.jp)

# Plan for 2017

- Go forward the ongoing joint researches
- **Inclusion of Myanmar and other ASEAN countries into the platform**
- Widen the multilateral collaboration through JASTIP-NET researches
- Strengthen the collaboration with Industry Sectors
- Strengthen the collaboration with SATREPS, Joint Usage / Research Center activities and other international programs
- **Strengthen international networks on biodiversity and bioresources**



- **Call for JASTIP-Net 2017**
- Application deadline: July 31, 2017 17:00
- In order to expand and strengthen the JASTIP activities, we call for research partners who are willing to join our research networks (JASTIP-Net). We are looking for researchers who are ready to parti...

Details on

<http://jastip.org/eventinfo/call-for-jastip-net-2017/>

# WP3 JASTIP-NET Projects 2016

- Bioprospecting of plant resources in ASEAN countries to produce highly value-added products  
Kasetsart University, LIPI, Kyoto University
- Development of integrated process for conversion of sugarcane trash to bioethanol and value-added chemicals  
LIPI, Chulalongkorn University, Kyoto University (WP2 & 3)
- Decolorization and detoxification of synthetic dyes and PAHs by tropical fungi from Indonesia and Thailand  
LIPI, NSTDA, Kyoto University

